

## FBB3080 Computational nanophotonics / Nanofotonik beräkningar

2011, February to March

Basic 7,5 hp

Local for lectures and laboratory work: Meeting room, Laboratory of Photonics and Microwave Photonics, Elevator C, Floor 3, Electrum 229, Kista campus.

time	Preparation and lecture/lab content	Lecture & Lab	Home assignment	
v8	23/02, 10:00-11:45	General introduction	Lecture 1	Home assignment 1: Read Chapter 1 of FBB3080a.pdf
	24/02, 10:00-11:45	Electron in nano	Lecture 2	Home assignment 2: Get known the computer codes of home_assignment_2.pdf
v9	02/03, 10:00-11:45	Light-matter interaction. Read Chapter 2 of FBB3080a.pdf	Lecture 3	
	03/03, 10:00-11:45	Superlattices and Microstructures, vol.30, p.69, 2001	Lecture 4. Laboratory work 1	Compute photocurrent of quantum well infrared photodetector
v10	09/03, 10:00-11:45	QD Biomarker Read Chapter 3 of FBB3080b.pdf	Lecture 5	Home assignment 3 FBB3080a.pdf, p.49-50 Find eA/P for solar radiation
	10/03, 10:00-11:45	QD-based solar cell: MEG	Lecture 6	Home assignment 4
v11	16/03, 10:00-11:45	Introduction to plasmonics I	Lecture 7	Read FBB3080c.pdf
	17/03, 10:00-11:45	Introduction to plasmonics II	Lecture 8	Home assignment 5
v12	23/03, 10:00-11:45	Simulation of plasmonic waveguides with Finite-element method	Laboratory work 2	Simulation hands-on practice
	24/03, 10:00-11:45	Plasmonic devices	Lecture 9 Summary	
v13	30/03, 10:00-11:45	Hand in home assignments and lab reports	Written examination	
v36	09/09, 10:00-11:45	Hand in home assignments and lab reports	Written examination	

2011, May

Project 2,5 hp

One computational project will be given for those who wish to continue to the 2,5 hp project. The students have one week for the project. The goal of this project is how to prepare for unpredictable real-world problems.

Deadline for project report: 2011-05-06, kl.12.00